Intergenerational Transmission Caregiving?

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Abstract

We examine the extent to which caregiving exerts role modelling effect on the next generation of informal caregivers. We exploit a reduction in the public financing of home health care which would have increased on the supply of caregiving, and we investigate whether such increased provision of informal care for aging parents increased the reception of informal care from children in old age. More specifically, we examine the effect of the Medicare Home Health Reform. We use data from the Health and Retirement Survey and exploit exogenous variation in caregiving brought about by a large decline in financing of Medicare Home health care between 1997 and 2000 with the Interim Payment System (IPS). The change in reimbursement created a quasi-experiment whereby the drop in the provision of Medicare home health care was more pronounced in some US states compared to others. The IPS caused approximately 5% increase in the provision of informal care to ageing parents from adult children. We examine whether when those adult children age and find that they are close to 4% more likely to receive care from their own children. Next, we examine the heterogeneous effect by groups that differ in family ties, namely Hispanics and Asians compared to Caucasian Americans.

Keywords: caregiving, role modelling effects, Medicare home health reform, family toes, intergenerational transmission.

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1. Introduction

Norms, beliefs, and preferences are potentially formed through role modelling efforts by parents, transmitting these over generations (Grusec and Hastings, 2007). One common activity that is heavily influenced by social norms is unpaid caregiving. Caregiving duties are a core part of social norms in many western societies, and informal care provided by the family is one of the main sources of care worldwide (Norton, 2016) and the economic value of unpaid caregiving exceed that of the nursing homes and paid home care budgets (Arno et al, 1999). As other social duties, caregiving duties are typically transmitted intergenerationally, and role modelling plays a key role in such a process. That is, children exposed to caregiving parents are arguably more likely to be caregivers themselves. Parents can exert significant effects on their children’s attitudes and behaviours through ongoing role-modeling, application of sanctions and rewards, or transfers of knowledge and resources (Glass et al 1986). However, we still know little about what motivates individuals to supply care to their older age family members.

Financial incentives such as caregiving allowances can exert an influence alongside the availability of public funded home health care. However, caregiving often results from the presence of caregiving duties, that is family social norms that are formed across generations. This paper attempts to understand the formation of such caregiving social norms by examining the extent to which the supply of care to elderly parents is influenced by the role modelling effect of previous generation provision of care which creates an expectation to younger generations namely a vertical transmission of caregiving duties.

This paper exploits data on longitudinal evidence from more than three decades of records of Americans over fifty years of age who were followed over time. We exploit
exogenous variation in caregiving brought about by a large decline in financing of Medicare Home health care between 1997 and 2000 with the Interim Payment System (IPS). The change in reimbursement created a quasi-experiment whereby the drop in the provision of Medicare home health care was more pronounced in some US states compared to others. The IPS caused an increase in the provision of informal care to ageing parents from adult children. Home care is mainly funded by public sources and during the period after the introduction of the IPS it was the fastest growing category of national health care expenditures (Catlin et al. 2007), as which offers respite for families who pay and provide care informally otherwise. Our estimates suggest that children exposed to the IPS are more likely to supply care themselves, in addition to influencing their parent supply of care. We add to the following way.

First, we add to Golberstein et al (2009) which documents the effect of restrictive payment caps for Medicare home health care with increased informal care, mainly among lower income individuals in need of care. Indeed, we document that such reduction in informal care has spill-over effect’s bias role modelling to their children. This is the case because caregiving is very much intergenerationally transmitted, hence an increase in the supply of unpaid informal care exert effect on children supply of care.

Second, we add to the small literature on intergenerational transmission of caregiving (Charles et al, 2015), which is mostly descriptive so far by exploiting evidence from an exogenous policy intervention. The supply of care can be driven by a series of potential confounder such as family culture, pro-social behaviours, risk and time preference, preferences and experience effects all influencing the supply of care.

Third, we add to the literature on the incentives for the supply of care, as we document in the related literature there are several potential drivers of the supply of care. This
paper shows that supply can be stimulated by changes in role modelling by children which ignite the role of social norms, and role models.

Finally, the paper adds to the literature on role modelling and intergenerational transmission, by examining whether role modelling effects are influenced by gender specific transmission. That is, traditionally, caregivers have been women, hence we specifically examine gender heterogeneities in the supply of care. In addition, we examine whether when those adult children age, they are more likely to receive care from their own children. Next, we examine the heterogeneous effect by groups that differ in family ties, namely Hispanics and Asians compared to Caucasian Americans.

The rest of the paper is organised as follows. Next section reports the main background of the paper. Section three describes the data and empirical strategy. Section four reports the main results. Section five the heterogeneity and a final section concludes.
2. Related literature

This paper examines the intergenerational transmission of caregiving, which contributes to a series of finding in the related literature, including the following:

2.1 Role modelling and gender assortative preferences.

Parents play a central role in the child’s socialization process (Collins et al., 2000), yet mother might have a stronger influence than parents in the transmission of trust (Dohmen et al., 2012), and this might be especially the case in the transmission of caregiving duties where one might find gender assortative preferences namely mother influence on daughters.

2.2 Caregiving as occupation choice.

Previous studies examining the supply of care study using evidence of the general social survey in the United States whether individuals whose parents provided care, either in the market or full-time in the home, are more likely to do care work themselves (Charles et al., 2015). Interestingly, although they find an association, they attribute it to the fact that parents influence occupational choice as opposed to the supply of care. Care instead if conceptualised as a vocational activity resulting from a personal calling, which applied particularly among women and differ across ethnic groups. This involves some moral duty to provide care which in different countries takes the form of ‘filial piety’.

2.3 Supply of care as a proxy for pro-social and other behaviours.

If care-working parents transmit more altruistic values, these values may in turn motivate pursuit of care work by their children. Wilhelm et al (2008) document that parents can influence their children’s generosity. Similarly, Dohmen et al. (2012), have documented parental-child correlations in measures of risk and trust attitudes. Some of those
intergenerational correlation might well be influenced by other confounded such as parental cognitive abilities (Grusec and Hastings, 2007), this may underpin both pro-social preferences, alongside the probability of children to supply care.

2.4 Incentives for the supply of care

The effect of informal care supply on labour market participation suggests ‘no causal effect’ (Van Houtven et al., 2013). This can be in part the results of caregiving and employment being influenced by norms. However, we still know little about how such norms do attitudes change over time.

3. Data

The data sample comes from Health and Retirement Study (HRS) Survey. The HRS is a nationally representative longitudinal survey data on individuals (both respondent and their spouses) who were 51-61 years old in 1992. We use the HRS data in two different segments. First, we use data from 1994 through 2000 waves of the HRS for identifying the impact of Interim Payment Reform (IPS) on the care supplied by respondents to their parents. Subsequently, we use the larger sample of data from 2002 through 2018 waves of the HRS to find the evidence of intergenerational mobility of caregiving. We map people who provided care to their parents during 1994 through 2000 and check whether these individuals receive care from their children should they need help with activity of daily living (ADL) and instrumental activity of daily living (IADL) related activities in later years. We restrict our sample to at least one activity of ADL or IADL.

4. Empirical Strategy

4.1 Cross State Variation in the Policy Change

The IPS imposed a cap based on a blend of each home health agency cost in 1994 and the cost in the census division. Therefore, two agencies with the same cost in 1994 but in states
within different census divisions with different utilization may have faced very different caps after the IPS. The reasoning applied to an agency in a state can be applied to the average of agencies in that state, which allows us (following McKnight, 2004, 2006) to construct a measure of restriction in reimbursement of Medicare home health care at the state level. Therefore, with similar increasing trends between 1994 and 1997, states where aggregate home health agencies have average per patient costs below the census division in 1994 face a reimbursement limit that is less restrictive than the limit faced by states where, on average, the average per patient cost in 1994 is above the average per patient cost in their census division.

McKnight (2004, 2006) constructs a measure that captures a cross-state component of the variation implied by the IPS with the main focus of identifying the impact of the IPS introduced in 1997 by the BBA on the number of Medicare home care visits received by Medicare beneficiaries. Here we use the same measure to study whether the IPS affected caregiving to parents.

To create the variable used by McKnight (2004, 2006) to capture the cross-state variation in reimbursement, we need to use a measure of cost. Here we follow McKnight (2006) and identify the average number of visits per user as the most appropriate measure of cost to use. More formally, McKnight (2004, 2006) defines the following measure of restriction in reimbursement generosity:

\[ \text{Restrictiveness}_{sc} = \bar{A} - \bar{A}_C \]  

where \( \bar{A}_S \) is the average number of Medicare home care visits per user in 1994 in state \( s \), and \( \bar{A}_C \) is the average number of Medicare home care visits per user in 1994 in state \( s \)’s census division. The restrictiveness measure is between -40.9 (Kentucky) and 34.7 (Utah).

\[ 4.2 \text{ Difference-in-Differences Specification} \]
Equation 2 presents the difference-in-differences strategy that compares changes in care supply to parents in states that were more restricted by the IPS with changes in care supply to parents in states that were less restricted by the IPS:

$$H_{it} = \alpha_t + S_i + S_i t + Post_t \beta + Post_t \ast Restrictiveness_{st} \gamma + e_{it}$$

(2)

$H_{it}$ is the care supplied by respondents to their parents for the group in state $i$ in year $t$; $\alpha_t$ and $S_i$ are year and state fixed effects, and $S_i t$ are state trends. $Post_t$ is a dummy equal to 1 for years 1998-2000 in which the IPS was in place (McKnight, 2006).

Restrictiveness$_{st}$ captures state variation in the policy change; $e_{it}$ is the error term. We cluster the standard errors at the state level (Bertrand, Duflo, Mullainathan, 2004). To test the plausibility of the identification strategy—requiring that, absent the IPS, trends in mortality rates would have been the same in more intensively treated states compared to less intensively treated states — We restrict our sample to years 1994-1996 and interact year effects with the Restrictiveness measure, conditioning on state and year fixed effects. We test the null hypothesis that the interactions of year dummies with the Restrictiveness measure are jointly 0. From this exercise we cannot reject that trend in caregiving to parents were the same for more and less restricted states in the pre-policy period.

4.3 Intergenerational Transfer of Caregiving Specification

Equation 3 presents the regression equation for the impact of caregiving to parents by respondents on the care provided to respondent by their children/grandchildren:

$$R_{ist} = \alpha_t + \theta_s + V_s t + \gamma Caregiver + \beta X_{ist} + e_{ist}$$

(2)
$R_{it}$ is the care received by respondents from their children/grandchildren for individual $i$ in a state $s$ in the year $t$; $\alpha_t$ and $\theta_s$ are year and state fixed effects, and $\nu_{st}$ are state trends. $X$ is a set of individual level controls. $\gamma$ indicates the coefficient of interest estimates the effect of Respondents providing care to their parents on the likelihood of receiving care from their children.

### 5. Results

#### 5.1 IPS and Caregiving to Parents

The estimates obtained from the Difference-in-Differences technique under the identifying assumption indicate that the IPS was associated with an increase in the likelihood of respondent caring for parents by approximately 5 percent (Column 3 of Table 2). We begin with Column 1 that estimates a very basic model with only outcome and treatment variable (IPS). Later, we incorporate in Column 2 the state as well as the year fixed effects and the linear trends into the model which changes the magnitude of the effect and its significance. Further, we include both individual and family level controls into the model and thus the estimates our fully specified DiD model is reported in Column 3 of Table 2. We find that the IPS is associated with respondent caregiving to parents by appx. 5% points. Further, we include individual level fixed effects and the estimates of which are reported in the Column 4 of Table 2. The effect found to be increased at the significance level of 10%.

| Table 2: Impact of Medicare Interim Payment Reform on Caregiving to Parents |
|---------------------------------|-----------------|-----------------|-----------------|-----------------|
|                                | Dependent Variable: Caregiving to Parents | (1)             | (2)             | (3)             | (4)             |
| IPS (Medicare Restrictions)    | -0.0032          | 0.0916***       | 0.0462***       | 0.074*          |
|                                | (0.00082)        | (0)             | (0.0586)        | (0.0435)        |
| State + Year FE & Lin Trends   | NO              | YES             | YES             | YES             |
| Controls                       | NO              | NO              | YES             | YES             |
| Individual Fixed Effects       | NO              | NO              | NO              | YES             |
Additionally, we estimate our fully specified model for sibling related outcomes: Sibling caring for parents and providing them with financial assistance. Column 1 of Table 3 shows that IPS was associated with appx. 3% increase in the likelihood of sibling caring for parents. Similarly, Column 3 of Table 3 indicates that IPS increases the probability of sibling providing financial assistance to parents by appx. 3% points, almost equivalent to sibling providing care to parents. These results indicate that the IPS made it difficult for parents who are in need of care and relied heavily on household members to provide for the shortcoming occurred due to IPS.

| Table 3: Impact of Medicare Interim Payment Reform on Caregiving to Parents and Financial Help by Sibling |
|---------------------------------------------------------------|---------------------------------------------------------------|
|                                | Caregiving to Parents (Sibling) | Financial help to Parents (Sibling) |
|                                | (1)  | (2)  | (3)   | (4)      |
| IPS (Medicare Restrictions)   | 0.0326*** | 0.112** | 0.0331*** | 0.0295 |
|                                | (0.0034) | (0.045) | (0.0056) | (0.0402) |
| State + Year FE & Lin Trends  | YES | YES | YES | YES |
| Controls                      | YES | YES | YES | YES |
| Individual Fixed Effects      | NO  | YES | NO  | YES |
| N                            | 21,716 | 21,716 | 20,966 | 20,966 |
| Number of Persons             | 7,791 |

5.2 Intergenerational Transmission of Caregiving to Children

For finding the evidence of intergenerational transmission of caregiving, we investigate the individuals, who provide help with ADL activities their parents, in later waves and whether
their children/grandchildren assisted them should they need help with ADL activities. Table 4 enlists the estimates of the impact of respondents providing care to their parents on the likelihood of such individuals being cared by their children/grandchildren. Column 3 in the Table 4 represents the estimates from the fully specified model without individual level fixed effects and shows that respondents are 4% more likely to be cared by their children/grandchildren if they provided care to their parents. The inclusion of individual level fixed effects into the model increases the magnitude of the effect. However, both of these estimates are not significant to begin with.

Similarly, we investigate to find evidence of intergenerational transmission of caregiving but in terms of IADL activities (Table 5). We find that respondents are 2.5% more likely to receive help with IADL activities from their children if they provided such care to their parents (Column 4 of Table 5). These results are not significant at any level of significance.

<table>
<thead>
<tr>
<th>Table 4: Intergenerational Mobility of Caregiving to Parents (ADL)</th>
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<tr>
<td>Dependent Variable: Respondent receiving care from Children/Grandchildren (ADL)</td>
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<tr>
<td>Caregiving to Parents (ADL)</td>
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<td>State + Year FE</td>
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<td>Controls</td>
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<td>Individual Fixed Effects</td>
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<td>Number of Persons</td>
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Conclusion

We study the impact of IPS on caregiving to parents by respondents and then investigate, using later waves of HRS, how likely these respondents who provide care to their parents receive help from their children/grandchildren as evidence of intergenerational transmission of caregiving. Our results indicate that the IPS did increase the likelihood of caregiving to parents as the reform put more restriction on the usage of home care that was covered under Medicare. In addition, we find the evidence of intergenerational transmission of caregiving. However, these estimates are not significant.
References


